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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,218	11/01/2001	Peter R. Kalkbrenner	100.230US01	4098

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EXAMINER

BUI, HUNG S

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 07/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/002,218

Applicant(s)

KALKBRENNER, PETER R.

Examiner

Hung S Bui

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-91 is/are pending in the application.
- 4a) Of the above claim(s) 17-91 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, lines 1-2, the structure of the first block "comprises a plurality of first blocks" is unclear.

Regarding claim 3, lines 1-2, the structure of the second block "comprises a plurality of second blocks" is unclear.

Claim Rejections - 35 USC § 103

3. Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burstedt et al. [US 5,801,928] in view of Varnau et al. [US 4,309,856].

Regarding claim 1, Burstedt et al. disclose a mounting apparatus (figure 5) comprising:

- at least one first retention means (18) secured within a housing (10), the first retention means respectively receiving a first edge of a circuit board (30);
- at least one second retention means (16) within the housing having a surface (100) receiving a second edge of the first circuit board that is perpendicular to the first edge of the circuit board.

Burstedt et al. disclose the instant claimed invention except for the retention means being able to hold two spatially separated circuit boards and having grooves to receive the edges of both of the circuit boards.

Varnau et al. disclose a circuit board standoff support means (16) having a plurality of grooves (figure 2, see column 2, lines 38-68) for supporting a pair of circuit boards (10 and 12, column 1, line 65).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the standoff means of Varnau et al. for the retention means of Burstedt et al., for the purpose of firmly holding the circuit board in place without stressing them.

Regarding claims 2-3, Burstedt et al. disclose a plurality of both the first and second retention means (figure 1).

Regarding claim 5, Varnau et al. further teaches the standoff support means including a projection (38, figure 2) having an aperture (figure 1)

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the projection including an aperture in the retention means of Burstedt et al., as modified, for the purpose of retaining the circuit board in place.

4. Claims 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burstedt et al., as modified, as applied to claim 1 above, and further in view of Crowley [US 5,963,432].

Regarding claim 4, Burstedt et al., as modified, disclose the instant claimed invention except for the grooves being tapered.

Crowley discloses a circuit board standoff means (200) having a tapered groove (figure 8).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the taper design of Crowley in Burstedt et al., as modified, for the purpose of facilitating mounting of the circuit board.

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burstedt et al., as modified, as applied to claim 5 above, and further in view of Burns [US 5,008,777].

Regarding claims 6-7, Burstedt et al., as modified, disclose the instant claimed invention except for the aperture being threaded.

Burns discloses a circuit board standoff (30) having a threaded aperture (32) cooperating with a screw (40) aligned with and supporting a circuit board (20) to the standoff (figure 3).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use threading design for the aperture of Burstedt et al., as modified, as suggested by Burns, for the purpose of firmly retaining and securing the circuit boards in the standoff.

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6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burstedt et al., as modified, as applied to claim 1 above, and further in view of Speraw et al. [US 5,018,982].

Burstedt et al., as modified, disclose the instant claimed invention except for: the retention means having holes passing therethrough to retain the retention means to the housing.

Speraw et al. disclose a standoff means (40) for a circuit board (11-13) being secured to a base (15) by means of a fastener (19) extending through a hole within the standoff (figure 1).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the mounting means of Speraw et al. for the retention means of Burstedt et al., as modified, for the purpose of securing the retention means within the housing.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burstedt et al., as modified, as applied to claim 8 above, and further in view of Clements [US 6,122,176].

Burstedt et al., as modified, disclose the instant claimed invention except for the retention means being secured to the base by means of an elongated hole.

Clements discloses a standoff design (502, 504, 506) using an elongated hole for the standoff fastener support mount.

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the elongated hole design of Clements with Burstedt et al., as modified, for the purpose of permitting adjustability of the standoff mounting.

8. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burstedt et al. in view of Varnau et al. and Crowley.

Regarding claim 10, Burstedt et al. disclose a mounting apparatus (figure 5) comprising:

- a plurality of first retention means (18) secured within a housing (10), the first retention means respectively receiving a first edge of a circuit board (30);
- a plurality of second retention means (16) within the housing having a surface (100) receiving a second edge of the first circuit board that is perpendicular to the first edge of the circuit board.

Burstedt et al. disclose the instant claimed invention except for the retention means being able to hold two spatially separated circuit boards and tapered grooves to receive the edges of both of the circuit boards.

Varnau et al. disclose a circuit board standoff support means (16) having a plurality of grooves (figure 2, see column 2, lines 38-68) for supporting a pair of circuit boards (10 and 12, column 1, line 65).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the standoff means of Varnau et al. for the retention means

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of Burstedt et al., for the purpose of firmly holding the circuit board in place without stressing them.

Crowley discloses a circuit board standoff means (200) having a tapered groove (figure 8).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the taper design of Crowley in Burstedt et al., as modified, for the purpose of facilitating mounting of the circuit board.

Regarding claim 11, Varnau et al. further teaches the standoff support means including a projection (38, figure 2) having an aperture (figure 1)

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the projection including an aperture in the retention means of Burstedt et al., as modified, for the purpose of retaining the circuit board in place.

Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burstedt et al. as applied to claim 11 above, and further in view of Burns.

Burstedt et al., as modified, disclose the instant claimed invention except for the aperture being threaded.

Burns discloses a circuit board standoff (30) having a threaded aperture (32) cooperating with a screw (40) aligned with and supporting a circuit board (20) to the standoff (figure 3).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use threading design for the aperture of Burstedt et al., as

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modified, as suggested by Burns, for the purpose of firmly retaining and securing the circuit boards in the retention means.

9. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burstedt et al., as modified, as applied to claim 10 above, and further in view of Speraw et al. [US 5,018,982].

Regarding claims 14-15, Burstedt et al., as modified, disclose the instant claimed invention except for: the retention means having holes passing therethrough to retain the retention means to the housing.

Speraw et al. disclose a standoff means (40) for a circuit board (11-13) being secured to a base (15) by means of a fastener (19) extending through a hole within the standoff (figure 1).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the mounting design of Speraw et al. for the retention means of Burstedt et al., as modified, for the purpose of securing the retention means within the housing.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burstedt et al. in view of Varnau et al., Crowley and Burns.

Regarding claim 16, Burstedt et al. disclose a mounting apparatus (figure 5) comprising:

- a plurality of first retention means (18) secured within a housing (10), the first retention means respectively receiving a first edge of a circuit board (30);
- a plurality of second retention means (16) within the housing having a surface (100) receiving a second edge of the first circuit board that is perpendicular to the first edge of the circuit board.

Burstedt et al. disclose the instant claimed invention except for the retention means being able to hold two spatially separated circuit boards, tapered grooves to receive the edges of both of the circuit boards and the aperture being threaded.

Varnau et al. disclose a circuit board standoff support means (16) having a plurality of grooves (figure 2, see column 2, lines 38-68) for supporting a pair of circuit boards (10 and 12, column 1, line 65).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the standoff means of Varnau et al. for the retention means of Burstedt et al., for the purpose of firmly holding the circuit board in place without stressing them.

Crowley discloses a circuit board standoff means (200) having a tapered groove (figure 8).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the taper design of Crowley in Burstedt et al., as modified, for the purpose of facilitating mounting of the circuit board.

Burns discloses a circuit board standoff (30) having a threaded aperture (32) cooperating with a screw (40) aligned with and supporting a circuit board (20) to the standoff (figure 3).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use threading design for the aperture of Burstedt et al., as modified, as suggested by Burns, for the purpose of firmly retaining and securing the circuit boards in the standoff.


Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung S Bui whose telephone number is (703) 305-8024. The examiner can normally be reached on Monday-Friday 8:30AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David S. Martin can be reached on (703) 308-3121. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0956.

HB
7/25/02


RANDY W. GIBSON
PRIMARY EXAMINER